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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/653,351	08/28/2003	Franco Stefani	2541-1011	3039

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EXAMINER
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EWALD, MARIA VERONICA

ART UNIT	PAPER NUMBER
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1722

DATE MAILED: 08/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/653,351	STEFANI, FRANCO	
	<b>Examiner</b>	<b>Art Unit</b>	
	Maria Veronica D. Ewald	1722	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. ____   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____  | 6) <input type="checkbox"/> Other: ____                                     |

*u*

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

13. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 1 – 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the phrase "of a type where" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d). In addition, claim 1 also states "an apparatus for regulating components of rotary machines...on a mobile rest plane on which the tiles are translated in a predetermined direction, the following operate: "a matrix-bearing cylinder, mobile in rotation about an axis thereof..." The phrases "on which the tiles are translated" and "mobile in rotation about an axis thereof" are process/method limitations and do not provide structural limitation to the apparatus being claimed and thus, are rendered indefinite. Furthermore, the term "predetermined" above also renders the claim vague and indefinite.

Regarding claim 7, the phrase "...rotatably solidly and axially slidably..." also renders the claim indefinite because it is unclear what type of structural limitation this phrase is providing and thus, the claim is rendered indefinite.

***Claim Rejections - 35 USC § 103***

14. Claims 1 – 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stefani (U.S. 5,477,781) in view of Kohler, et al. (U.S. 5,378,503) and further in view of Pankake (U.S. 5,743,964). Stefani teaches a rotary machine for decoration of ceramic tiles, of a type where, on a mobile rest plane on which the tiles are translated in a predetermined direction, the following operate (column 2, lines 11 – 12): a matrix-bearing cylinder, mobile in rotation about an axis thereof, (column 2, lines 16 – 18), which matrix-bearing cylinder is provided with at least an elastically-deformable peripheral part having a smooth external cylindrical surface made of an elastomer material, on which smooth external cylindrical surface a shape is cut and recessed, which shape is a matrix (column 2, lines 20 – 24, 44 – 45); at least a doctor predisposed for operating in contact with the external surface of the matrix-bearing cylinder (column 2, lines 50 – 52); wherein it also comprises a vertically-developing frame (figure 1). Stefani further teaches that the matrix-bearing cylinder has organs for controlling the rotation thereof about a rotation axis (column 3, lines 26 – 29) and organs supporting the at least one doctor and organs for controlling the movements of the at least one doctor (column 2, lines 53 – 54, 58 – 61). Stefani, however, does not teach the presence of two slides to support the cylinder and doctor.

In a web coater that applies coating onto a web material, Kohler, et al. teach the use of an improved doctor assembly. Kohler, et al. teach that the apparatus consists of two slides – a first slide constrained on the vertically-developing frame and slidable vertically with respect thereto (column 4, lines 30 – 31), a second slide constrained on

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the vertically-developing frame and sliding vertically with respect thereto (column 4, lines 39 – 41), and means for relatively positioning the first slide and the second slide relative to the vertically-developing frame (column 4, lines 43 – 46). Kohler, et al. further teach that the means for relatively positioning comprise: a maneuvering screw having a vertical axis, on which maneuvering screw are coupled a first nut, which is solidly constrained to the first slide, and a second nut, which is solidly constrained in translation along the vertical axis to the second slide and which is mobile in rotation about the vertical axis with respect to the second slide, which vertical axis is also a rotation axis of the second nut and the first nut (column 4, lines 50 – 55, 67 – 68). In addition, the maneuvering screw is commanded to perform rotations of predetermined entities about the vertical axis of rotation thereof by a first step motor (column 4, lines 50 – 55, 67 – 68); the second nut being commanded to perform rotations of predetermined entities about the vertical axis of rotation and with respect to the second slide by a second step motor which is solidly constrained to the second slide (column 4, lines 54 – 58, 59 – 64).

In addition, Pankake teaches that it is typical to mount the cylinder/roll or several rolls and associated organs of a coating apparatus onto different linear slides (column 1, lines 65 – 67). Rolls are mounted on stacked linear slides to control the magnitude of the pressure between the rolls. Slides are typically mounted on bearings to facilitate movement (column 1, lines 62 – 65). Similarly, Kohler, et al. teach that the pressure and angle exerted by the doctor assembly on the web is controlled by controlling the movements of the slides relative to one another (column 5, lines 14 – 17).

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Therefore, it would have been obvious at the time of the Applicant's invention to one of ordinary skill in the art to modify the apparatus of Stefani with the two-slide configuration and motor-driven screw and nut devices of Pankake and Kohler, et al. for the purpose of controlling the pressure and angle exerted by the doctor assembly on the web or cylinder which is effected by controlling the movements of the slides relative to one another as taught by Kohler, et al. and Pankake.

Claims 4 – 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stefani in view of Kohler, et al., further in view of Pankake, and further in view of Reeve, et al (U.S. 3,693,585). Stefani, Kohler, et al. and Pankake teach the characteristics previously described. In addition, Kohler, et al. also teach that the second slide is associated to means for controlling a regulation of an inclination of the at least one doctor and also for controlling a pressure with which the at least one doctor is pressed contactingly against an external surface of the matrix-bearing cylinder (column 4, lines 12 – 20); the means comprising a linear actuator (column 5, lines 27 – 32) operating in two directions between the second slide and a second end of a lever, a first end of which is solidly constrained in rotation to the measuring device, which measuring device also operates between the second slide and the second end of the lever in order to measure displacements of the second slide with respect to a predetermined reference position (column 4, lines 35 – 38; column 5, lines 8 – 13, 14 – 17, 22 – 26). Furthermore, Kohler, et al. teach that the linear actuator operates together with a force measuring device, which measures an overall force, which is exerted by the linear

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actuator on the lever (column 4, lines 12 – 15; column 5, lines 42 – 50). However, neither Stefani nor Kohler, et al. nor Pankake teach that the second slide is connected to a shaft. In addition, none of the three teach the features of the shaft supported within a sleeve.

In a roll coating apparatus, Reeve, et al. teach the use of three coating sub-assemblies (column 2, lines 38 – 40). Each sub-assembly consists of an upper pressure roll and a lower coating roll (column 2, lines 49 – 51). Each of the rolls is mounted on shafts (item 30 – figure 1), which are journaled in bearings mounted on slides (item 40 – figure 3). This type of mounting allows the pressure exerted by the pressure roll to be varied as it contacts the coating roll (column 2, lines 60 – 62). Furthermore, the reference teaches that there is a post fixed to the upper end of each slide which has a threaded external sleeve, threaded into an opening in a cross piece which interconnects the upper ends of slide components (column 2, lines 65 – 68). This reads on the Applicant's claim that the second slide be connected to a shaft for supporting the doctor, which shaft is positioned parallel to the axis of rotation of the matrix-bearing cylinder and which shaft is coaxially supported in a sleeve.

In addition, Reeve, et al. teach that the shaft is supported by a free coupling in the sleeve and is coupled to the lever rotatably solidly and axially slidably; the shaft exhibiting an end affording a slot internally of which a cam pivot is engaged, which cam pivot is solidly constrained to a spindle shaft; the spindle shaft being commanded to rotate about a perpendicular axis to the axis of the shaft by a step motor and belt transmission (column 3, lines 1 – 7, 37 – 41). In addition, the reference teaches that the

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doctor is fixed to a support frame (column 3, lines 34 – 36), affording coaxial housings internally of which support frame the shaft is snugly coupled, which shaft affords a transversal hollow seating; the transversal hollow seating stably coupling with a pivot mounted eccentrically on the support frame and activated by a lever in order to pass from the stable coupling position with the hollow seating to a completely uncoupled position in which the shaft is free inside the coaxial housings (column 3, lines 37 – 46; column 4, lines 50 – 57). Furthermore, the reference teaches that the hollow seating is constituted by a portion of straight, circular cylindrical surface and in that the pivot exhibits an external diameter, which is equal to a diameter of the portion of straight, circular cylindrical surface delimiting the hollow seating (column 4, lines 50 – 57, 63 – 68). This configuration allows the pressure exerted on the coating roll to be determined by the setting of the threaded sleeve (column 3, lines 4 – 7) and determines the adjustment and position of the doctor roll (column 3, lines 44 – 46; column 4, lines 50 – 52, 54 – 57).

Therefore, it would have been obvious at the time of the Applicant's invention to one of ordinary skill in the art to modify the apparatus of Stefani with the modifications of Kohler, et al. and Pankake to further include the shafts, sleeves, pivots and seatings of Reeve, et al. for the purposes of varying the pressure exerted on the coating roll, or the matrix cylinder, and determining the desired position or adjustment of the doctor roll as taught by Reeve, et al.



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**Conclusion**

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maria Veronica D. Ewald whose telephone number is 571-272-8519. The examiner can normally be reached on M-F, 8 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MVE

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8/2/05  
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